

## chain nodes :

10 11 12 19 20 21 28 29 30 31 32 33

## ring nodes :

1 2 3 4 5 6 7 8 9 13 14 15 16 17 18 22 23 24 25 26 27

## chain bonds :

7-10 8-12 10-13 10-28 11-19 11-29 19-20 19-21 21-23 28-29 30-31 30-32 32-33

## ring bonds :

1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-9 7-8 8-9 13-14 13-18 14-15 15-16 16-17  
17-18 22-23 22-27 23-24 24-25 25-26 26-27

## exact/norm bonds :

4-7 5-9 7-8 7-10 8-9 8-12 10-28 11-19 19-20 21-23 22-23 22-27 23-24 24-25  
25-26 26-27 30-31 30-32 32-33

## exact bonds :

10-13 11-29 19-21 28-29

## normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6 13-14 13-18 14-15 15-16 16-17 17-18

## Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS  
11:CLASS 12:CLASS 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:CLASS  
20:CLASS 21:CLASS 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:CLASS  
29:Atom 30:CLASS 31:CLASS 32:CLASS 33:CLASS 34:CLASS

## Generic attributes :

29:

Saturation : Unsaturated  
Number of Carbon Atoms : less than 7  
Type of Ring System : Monocyclic

10/489087

s l1

SAMPLE SEARCH INITIATED 17:48:53 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 38 TO ITERATE

100.0% PROCESSED 38 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 391 TO 1129  
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 17:49:09 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 919 TO ITERATE

100.0% PROCESSED 919 ITERATIONS 10 ANSWERS  
SEARCH TIME: 00.00.01

L3 10 SEA SSS FUL L1

=> file caplus

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST  | 161.76           | 161.97        |

FILE 'CAPLUS' ENTERED AT 17:49:14 ON 14 MAY 2005  
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FILE COVERS 1907 - 14 May 2005 VOL 142 ISS 21  
FILE LAST UPDATED: 13 May 2005 (20050513/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l3

L4 7 L3

=> d l4 1-7 bib abs hitstr

L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN  
AN 2004:965067 CAPLUS  
DN 141:406039  
TI Combinations for the treatment of diseases involving cell proliferation,

migration or apoptosis of myeloma cells, or angiogenesis

IN Hilberg, Frank; Solca, Flavio; Stefanic, Martin Friedrich; Baum, Anke; Munzert, Gerd; Van Meel, Jacobus C. A.

PA Boehringer Ingelheim International G.m.b.H., Germany; Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G.

SO PCT Int. Appl., 101 pp.  
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

|    | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|----|--|------|----------|-----------------|----------|
| PI | WO 2004096224  | A2   | 20041111 | WO 2004-EP4363  | 20040424 |
|    | WO 2004096224  | A3   | 20041216 |                 |          |
|    | W:   |      |          |                 |          |
|    | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |          |
|    | RW:  |      |          |                 |          |
|    | BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |      |          |                 |          |

EP 1473043 A1 20041103 EP 2003-9587 20030429

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

PRAI EP 2003-9587 A 20030429

EP 2004-508 A 20040113

EP 2004-1171 A 20040121

AB The present invention relates to a pharmaceutical combination for the treatment of diseases which involves cell proliferation, migration or apoptosis of myeloma cells, or angiogenesis. The invention also relates to a method for the treatment of said diseases, comprising co-administration of effective amts. of specific active compds. and/or co-treatment with radiation therapy, in a ratio which provides an additive and synergistic effect, and to the combined use of these specific compds. and/or radiotherapy for the manufacture of corresponding pharmaceutical combination preps. The pharmaceutical combination can include selected protein tyrosine kinase receptor antagonists and further chemotherapeutic or naturally occurring semisynthetic or synthetic agents.

IT 656247-17-5 790241-30-4 790241-31-5

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

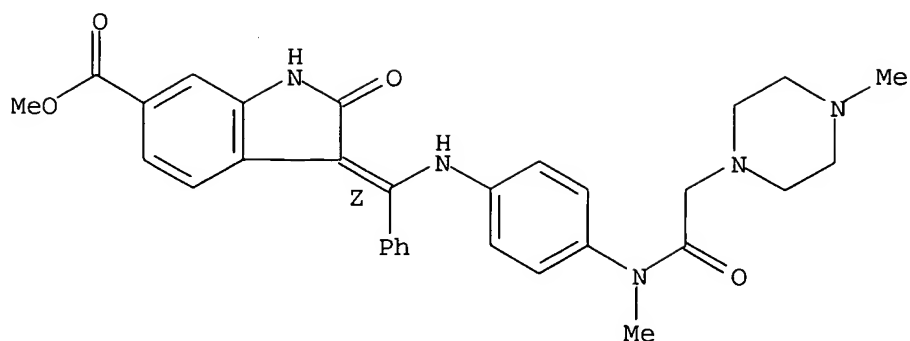
(drug combinations for diseases involving cell proliferation and migration or apoptosis or angiogenesis including protein tyrosine kinase receptor antagonists and radiotherapy)

RN 656247-17-5 CAPLUS

CN 1H-Indole-6-carboxylic acid, 2,3-dihydro-3-[[[4-[methyl[(4-methyl-1-piperazinyl)acetyl]amino]phenyl]amino]phenylmethylene]-2-oxo-, methyl ester, (3Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

10/489087



RN 790241-30-4 CAPLUS

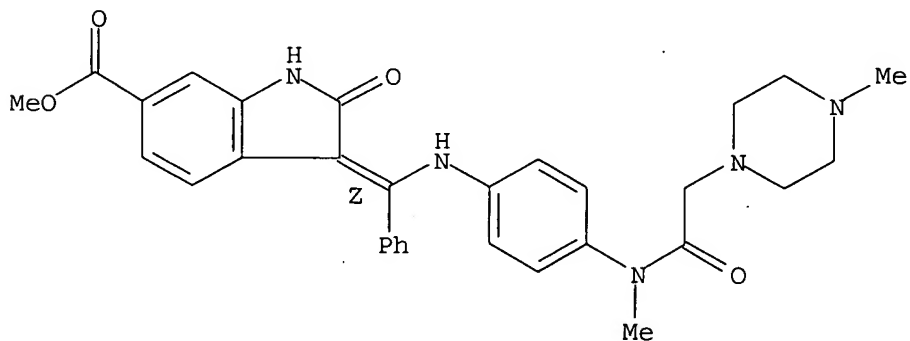
CN 1H-Indole-6-carboxylic acid, 2,3-dihydro-3-[[[4-[methyl[(4-methyl-1-piperazinyl)acetyl]amino]phenyl]amino]phenylmethylene]-2-oxo-, methyl ester, (3Z)-, monomethanesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 656247-17-5

CMF C31 H33 N5 O4

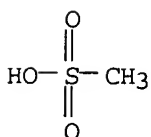
Double bond geometry as shown.



CM 2

CRN 75-75-2

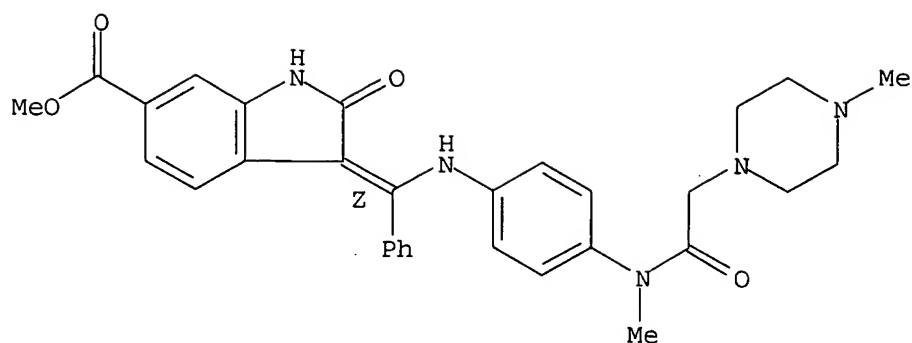
CMF C H4 O3 S



RN 790241-31-5 CAPLUS

CN 1H-Indole-6-carboxylic acid, 2,3-dihydro-3-[[[4-[methyl[(4-methyl-1-piperazinyl)acetyl]amino]phenyl]amino]phenylmethylene]-2-oxo-, methyl ester, dihydrochloride, (3Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



● 2 HCl

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:930932 CAPLUS  
 DN 141:400905  
 TI Combination of steroid and tyrosine kinase receptor antagonist for the  
 treatment of diseases involving cell proliferation, migration or apoptosis  
 of myeloma cells, or angiogenesis  
 IN Stefanic, Martin; Munzert, Gerd; Hilberg, Frank  
 PA Boehringer Ingelheim Pharma GmbH & Co. KG, Germany  
 SO Eur. Pat. Appl., 14 pp.  
 CODEN: EPXXDW

DT Patent  
 LA English

FAN.CNT 2

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| EP 1473043  | A1   | 20041103 | EP 2003-9587    | 20030429 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK   |      |          |                 |          |
| US 2005043233   | A1   | 20050224 | US 2004-830147  | 20040422 |
| WO 2004096224   | A2   | 20041111 | WO 2004-EP4363  | 20040424 |
| WO 2004096224   | A3   | 20041216 |                 |          |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |          |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
| PRAI EP 2003-9587   | A    | 20030429 |                 |          |
| EP 2004-508   | A    | 20040113 |                 |          |
| EP 2004-1171  | A    | 20040121 |                 |          |
| US 2004-542036P   | P    | 20040205 |                 |          |

AB The present invention relates to a pharmaceutical combination for the treatment of diseases which involves cell proliferation, migration or apoptosis of myeloma cells, or angiogenesis. The combination comprises the co-administration of a protein tyrosine kinase receptor antagonist and of a steroid.

IT 656247-17-5

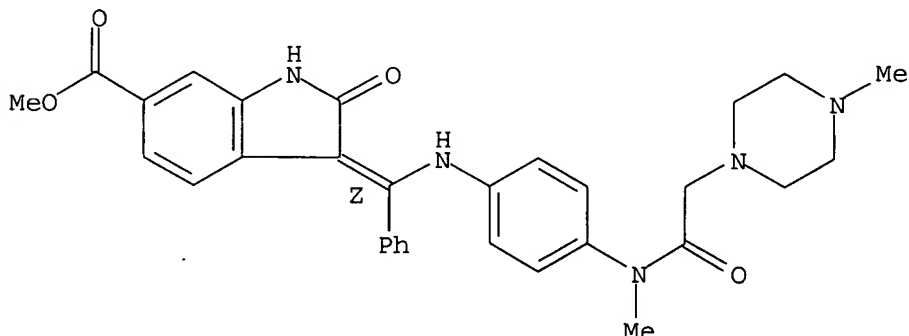
10/489087

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(combination of steroid and tyrosine kinase receptor antagonist for  
treatment of diseases involving myeloma proliferation, migration or  
apoptosis, or angiogenesis)

RN 656247-17-5 CAPLUS

CN 1H-Indole-6-carboxylic acid, 2,3-dihydro-3-[[[4-[methyl[(4-methyl-1-  
piperazinyl)acetyl]amino]phenyl]amino]phenylmethylene]-2-oxo-, methyl  
ester, (3Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:267298 CAPLUS

DN 140:303523

TI Preparation of heterocyclically substituted indolinones as inhibitors of  
various receptor tyrosine kinases

IN Kley, Joerg; Heckel, Armin; Hilberg, Frank; Roth, Gerald Juergen;  
Lehmann-Lintz, Thorsten; Lotz, Ralf R. H.; Tontsch-Grunt, Ulrike; Van  
Meel, Jacobus C. A.

PA Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G., Germany

SO PCT Int. Appl., 226 pp.

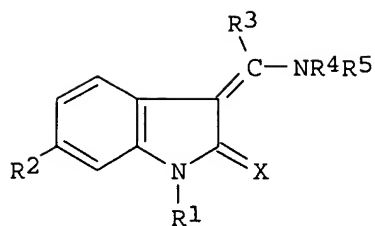
CODEN: PIXXD2

DT Patent

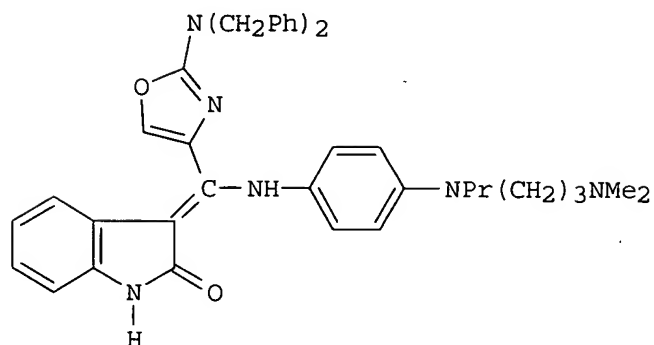
LA German

FAN.CNT 2

|      | PATENT NO.        | KIND   | DATE     | APPLICATION NO.  | DATE     |
|------|-------------------|--|----------|------------------|----------|
| PI   | WO 2004026829     | A2   | 20040401 | WO 2003-EP9978   | 20030909 |
|      | WO 2004026829     | A3   | 20041007 |                  |          |
|      | W:                | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |          |                  |          |
|      | RW:               | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                  |          |
|      | DE 10242350       | A1   | 20040318 | DE 2002-10242350 | 20020912 |
|      | DE 10252969       | A1   | 20040527 | DE 2002-10252969 | 20021114 |
| PRAI | DE 2002-10242350  | A  | 20020912 |                  |          |
|      | DE 2002-10252969  | A  | 20021114 |                  |          |
| OS   | MARPAT 140:303523 |  |          |                  |          |
| GI   |                   |  |          |                  |          |



I



II

AB Title compds. I [X = O, S; R1 = H, prodrug residue, such as alkoxy carbonyl, acyl; R2 = H, F, Cl, Br, CN, NO2, (un)substituted CO2H, CONH2; R3 = (un)substituted 5-6-membered heteroaryl; R4 = (un)substituted cycloalkyl, aryl; R5 = H, alkyl] were prepared. I exhibit an inhibiting action on various receptor tyrosine kinases and cyclin-CDK complexes and on the proliferation of endothelial cells and various tumor cells. Thus, 1-acetyl-2-indolinone was treated with 2-dibenzylaminooxazole-4-carboxylic acid to give 1-acetyl-3-{1-hydroxy-1-[2-dibenzylaminooxazol-4-yl]methylene}-2-indolinone which was treated with Me2N(CH2)3NPrC6H4NH2-4 to give the title compound II which had IC50 for inhibition of cell proliferation of 1 nM.

IT **674769-84-7P 674770-51-5P**

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

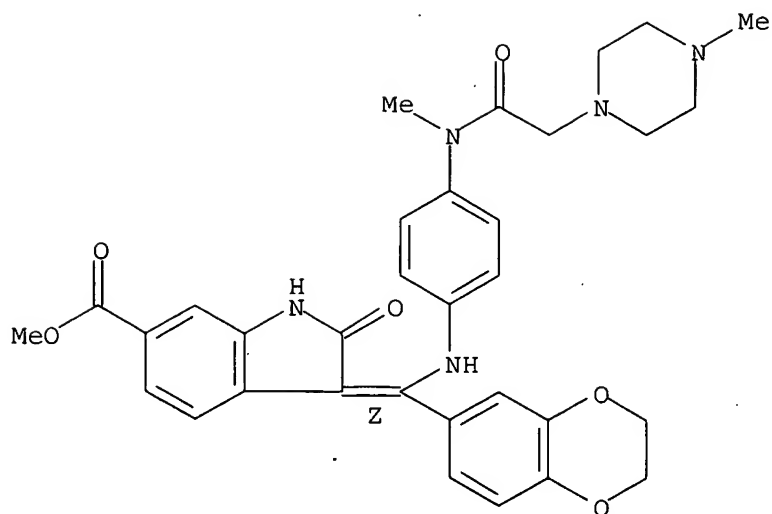
(preparation of heterocyclically substituted indolinones as inhibitors of various receptor tyrosine kinases)

RN 674769-84-7 CAPLUS

CN 1H-Indole-6-carboxylic acid, 3-[(2,3-dihydro-1,4-benzodioxin-6-yl)[[4-methyl[(4-methyl-1-piperazinyl)acetyl]amino]phenyl]amino]methylene]-2,3-dihydro-2-oxo-, methyl ester, (3Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

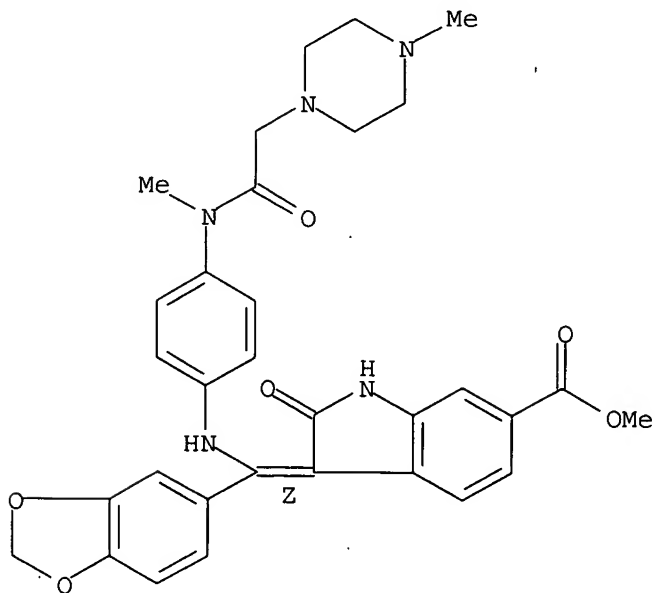
10/489087



RN 674770-51-5 CAPLUS

CN 1H-Indole-6-carboxylic acid, 3-[1,3-benzodioxol-5-yl][4-[methyl[(4-methyl-1-piperazinyl)acetyl]amino]phenyl]amino]methylene]-2,3-dihydro-2-oxo-, methyl ester, (3Z)- (9CI) (CA INDEX NAME)

Double bond geometry as described by E or Z.



L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:218460 CAPLUS

DN 140:270851

TI Preparation of heteroaryl-substituted aminomethylideneindolinones as cell proliferation inhibitors.

IN Kley, Joerg; Heckel, Armin; Roth, Gerald Juergen; Lehmann-Lintz, Thorsten; Lotz, Ralf; Hilberg, Frank; Tontsch-Grunt, Ulrike; Van Meel, Jacobus

PA Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G., Germany

SO Ger. Offen., 114 pp.

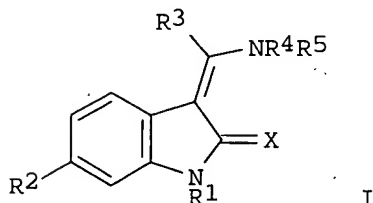
CODEN: GWXXBX



10/489087

DT Patent  
LA German  
FAN.CNT 2

|      | PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|------|---|------|----------|------------------|----------|
| PI   | DE 10242350   | A1   | 20040318 | DE 2002-10242350 | 20020912 |
|      | US 2005054710   | A1   | 20050310 | US 2003-656863   | 20030905 |
|      | WO 2004026829   | A2   | 20040401 | WO 2003-EP9978   | 20030909 |
|      | WO 2004026829   | A3   | 20041007 |                  |          |
|      | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                  |          |
|      | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                  |          |
| PRAI | DE 2002-10242350  | A    | 20020912 |                  |          |
|      | US 2002-414938P   | P    | 20020930 |                  |          |
|      | DE 2002-10252969  | A    | 20021114 |                  |          |
|      | US 2002-430790P   | P    | 20021204 |                  |          |
| OS   | MARPAT 140:270851   |      |          |                  |          |
| GI   |   |      |          |                  |          |



AB Title compds. [I; X = O, S; R1 = H, alkoxycarbonyl, alkanoyl, other prodrug residue; R2 = H, F, Cl, Br, cyano, NO2, CO2H, alkoxycarbonyl, cycloalkoxycarbonyl, etc.; R3 = (Ph-condensed) 5-6 membered heteroaryl, etc.; R4 = (imino-interrupted) (substituted) cycloalkyl; R5 = H, alkyl], were prepared 1-Acetyl-3-[1-methoxy-1-(2-dibenzylamino-4-oxazolyl)methylene]-2-indolinone and N-propionyl-N-(3-dimethylaminopropyl)-p-phenylenediamine were heated in DMF at 120° for 3 h; the cooled mixture was treated with aqueous NaOH/MeOH followed by stirring for 1 h to give 31% 3-(Z)-[1-[4-[N-propionyl-N-(3-dimethylaminopropyl)amino]phenylamino]-1-(2-dibenzylamino-4-oxazolyl)methylene]-2-indolinone. I inhibited HUVEC cell proliferation with IC50 = 0.2-120 nM.

IT 674769-84-7P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

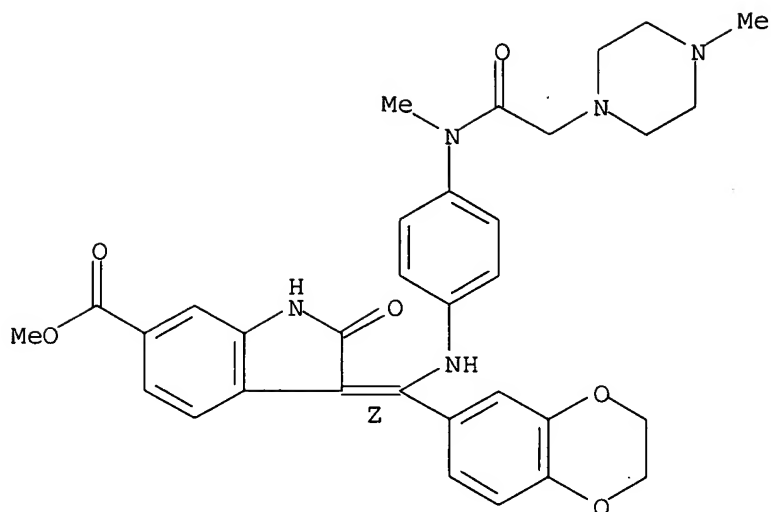
(claimed compound; preparation of heteroaryl-substituted aminomethylideneindolinones as cell proliferation inhibitors)

RN 674769-84-7 CAPLUS

CN 1H-Indole-6-carboxylic acid, 3-[(2,3-dihydro-1,4-benzodioxin-6-yl) [[4-[methyl[(4-methyl-1-piperazinyl)acetyl]amino]phenyl]amino]methylene]-2,3-dihydro-2-oxo-, methyl ester, (3Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

10/489087



IT 674770-51-5P

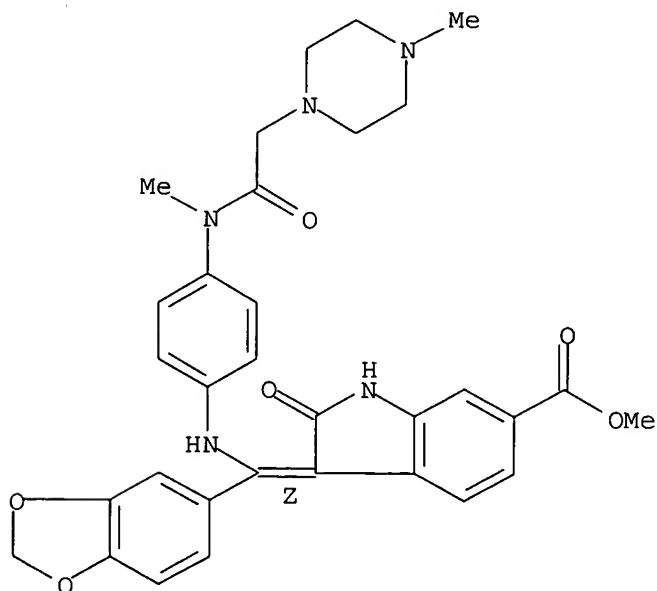
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of heteroaryl-substituted aminomethylideneindolinones as cell proliferation inhibitors)

RN 674770-51-5 CAPLUS

CN 1H-Indole-6-carboxylic acid, 3-[1,3-benzodioxol-5-yl][4-[methyl[(4-methyl-1-piperazinyl)acetyl]amino]phenyl]amino]methylene]-2,3-dihydro-2-oxo-, methyl ester, (3Z)- (9CI) (CA INDEX NAME)

Double bond geometry as described by E or Z.



L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2004:138723 CAPLUS

DN 140:193052

TI Use of LCK inhibitors for treatment of immunological diseases

10/489087

IN Roth, Gerald Jurgen; Heckel, Armin; Walter, Rainer; Hilberg, Frank;  
Hauptmann, Rudolf; Ernst, Steffen; Stefanic, Martin; Colbatzky, Florian  
PA Boehringer Ingelheim Pharma GmbH & Co. KG, Germany  
SO Ger. Offen., 12 pp.  
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO.  | DATE     |
|----|---------------|------|----------|------------------|----------|
| PI | DE 10237423   | A1   | 20040219 | DE 2002-10237423 | 20020816 |
|    | WO 2004017948 | A2   | 20040304 | WO 2003-EP8890   | 20030811 |
|    | WO 2004017948 | A3   | 20040422 |                  |          |
|    | WO 2004017948 | C1   | 20050324 |                  |          |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,  
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,  
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2004204458 A1 20041014 US 2003-640926 20030814

PRAI DE 2002-10237423 A 20020816

US 2002-409204P P 20020909

AB The invention discloses a method for treatment of immunol. diseases or  
pathol. conditions which contain an immunol. component, using certain LCK  
inhibitors, which already are known as kinase inhibitors for therapy in  
oncol., optionally in combination with one or more other medications  
selected from NSAIDs, steroids, DMARDs, immunosuppressants, biol. response  
modifiers, and antiinfectives. Also disclosed are pharmaceutical compns.  
which contain the LCK inhibitors as well as the other medications, and use  
of LCK inhibitors for production of a pharmaceutical composition for treatment

of

immunol. diseases or pathol. conditions which contain an immunol.  
component.

IT 656247-17-5

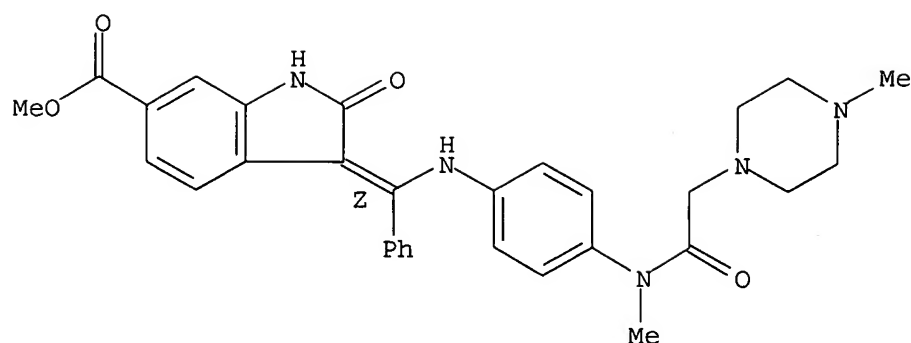
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)

(LCK inhibitors for treatment of immunol. diseases, and use with other  
agents)

RN 656247-17-5 CAPLUS

CN 1H-Indole-6-carboxylic acid, 2,3-dihydro-3-[[[4-[methyl[(4-methyl-1-  
piperazinyl)acetyl]aminolphenyl]aminolphenylmethylene]-2-oxo-, methyl  
ester, (3Z)- (9CI) (CA INDEX NAME)

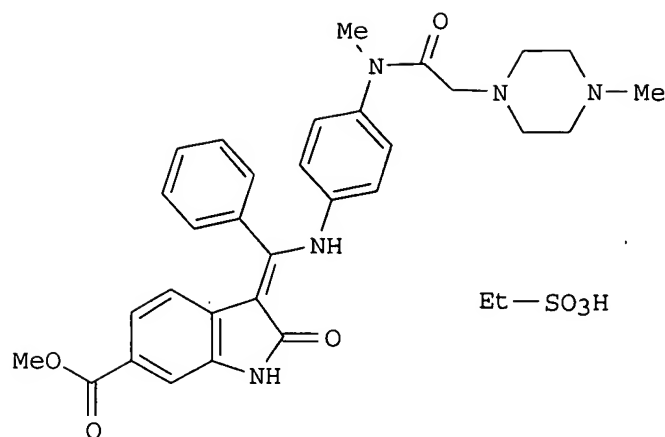
Double bond geometry as shown.



L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:120826 CAPLUS  
 DN 140:163706  
 TI preparation of crystalline 3-Z-[1-(4-(N-(4-methyl-piperazin-1-yl)-methylcarbonyl)-N-methyl-amino)-anilino]-1-phenyl-methylene]-6-methoxycarbonyl-2-indolinone-monoethanesulfonate as antitumor agent  
 IN Roth, Gerald Juergen; Sieger, Peter; Linz, Guenter; Rall, Werner; Hilberg, Frank; Bock, Thomas  
 PA Boehringer Ingelheim Pharma GmbH & Co. KG, Germany  
 SO PCT Int. Appl., 24 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|---|------|----------|------------------|----------|
| PI WO 2004013099  | A1   | 20040212 | WO 2003-EP7822   | 20030718 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                  |          |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                  |          |
| DE 10233500   | A1   | 20040219 | DE 2002-10233500 | 20020724 |
| CA 2493310  | AA   | 20040212 | CA 2003-2493310  | 20030718 |
| EP 1527047  | A1   | 20050504 | EP 2003-766212   | 20030718 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK   |      |          |                  |          |
| US 2004176392   | A1   | 20040909 | US 2003-623971   | 20030721 |
| PRAI DE 2002-10233500   | A    | 20020724 |                  |          |
| US 2002-404460P   | P    | 20020819 |                  |          |
| WO 2003-EP7822  | W    | 20030718 |                  |          |

GI



AB The present invention relates to the crystal form of compound 3-Z-[1-(4-(N-((4-methyl-piperazin-1-yl)-methylcarbonyl)-N-methyl-amino)-anilino)-1-phenyl-methylene]-6-methoxycarbonyl-2-indolinone-monoethanesulfonate (I) and the use thereof as medicament having antitumor action (no data). Thus, reaction of 3-Z-1-acetyl-3-(1-ethoxy-1-phenylmethylene)-6-methoxycarbonyl-2-indolinone and N-[(4-methyl-piperazin-1-yl)-methylcarbonyl]-N-methyl-p-phenylenediamine followed by treatment of ethanesulfonic acid yielded compound I.

IT **656247-18-6P**

RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(crystal structure; preparation of 2-indolinone derivs. as antitumor agents)

RN 656247-18-6 CAPLUS

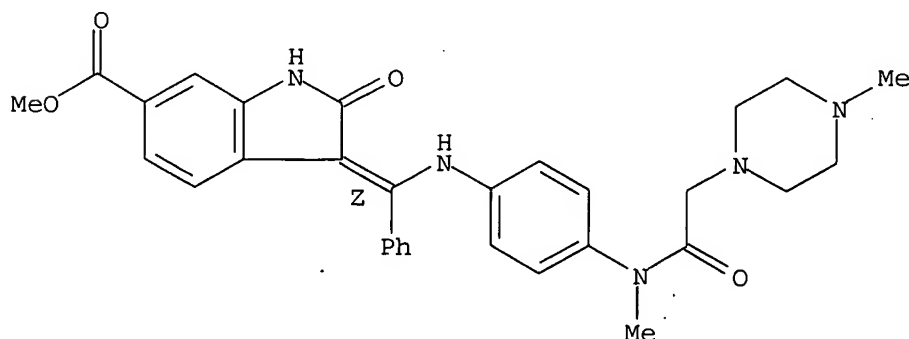
CN 1H-Indole-6-carboxylic acid, 2,3-dihydro-3-[[[4-[methyl[(4-methyl-1-piperazinyl)acetyl]amino]phenyl]amino]phenylmethylene]-2-oxo-, methyl ester, (3Z)-, monoethanesulfonate (9CI) (CA INDEX NAME)

CM 1

CRN 656247-17-5

CMF C31 H33 N5 O4

Double bond geometry as shown.

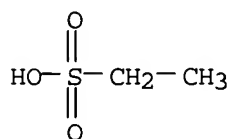


CM 2

CRN 594-45-6

10/489087

CMF C2 H6 O3 S



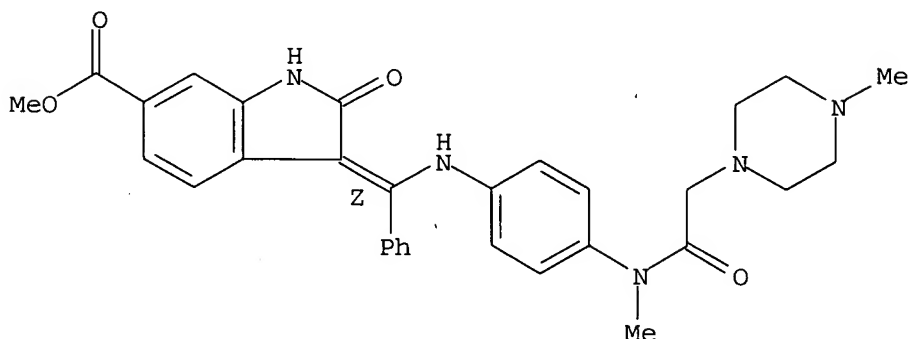
IT 656247-17-5P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of 2-indolinone derivs. as antitumor agents)

RN 656247-17-5 CAPLUS

CN 1H-Indole-6-carboxylic acid, 2,3-dihydro-3-[[[4-[methyl[(4-methyl-1-piperazinyl)acetyl]amino]phenyl]amino]phenylmethylene]-2-oxo-, methyl ester, (3Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:283925 CAPLUS

DN 134:311105

TI Preparation of substituted aminomethyleneindolinone inhibitors of tyrosine receptor kinases and CDK/cyclin kinases as antitumor agents and inhibitors of cell proliferation

IN Heckel, Armin; Roth, Gerald Juergen; Walter, Rainer; Van Meel, Jacobus; Redemann, Norbert; Tontsch-Grunt, Ulrike; Spevak, Walter; Hilberg, Frank

PA Boehringer Ingelheim Pharma K.-G., Germany

SO PCT Int. Appl., 282 pp.

CODEN: PIXXD2

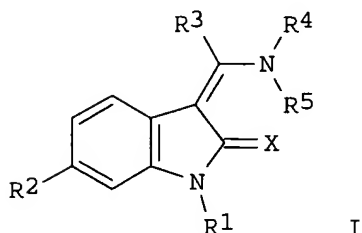
DT Patent

LA German

FAN.CNT 1

|     | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|-----|--|------|----------|-----------------|----------|
| PI  | WO 2001027081  | A1   | 20010419 | WO 2000-EP9867  | 20001009 |
| W:  | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |          |
| RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  |      |          |                 |          |

|   |  |          |                  |          |
|---|--|----------|------------------|----------|
|   | DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG |          |                  |          |
| DE 19949208   | A1   | 20010419 | DE 1999-19949208 | 19991013 |
| DE 10042696   | A1   | 20020314 | DE 2000-10042696 | 20000831 |
| US 6762180  | B1   | 20040713 | US 2000-678682   | 20001003 |
| CA 2387013  | AA   | 20010419 | CA 2000-2387013  | 20001009 |
| BR 2000014735   | A  | 20020716 | BR 2000-14735    | 20001009 |
| EP 1224170  | A1   | 20020724 | EP 2000-971347   | 20001009 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL |  |          |                  |          |
| JP 2003511441   | T2   | 20030325 | JP 2001-530102   | 20001009 |
| EE 200200197  | A  | 20030616 | EE 2002-197      | 20001009 |
| BG 106587   | A  | 20030131 | BG 2002-106587   | 20020405 |
| ZA 2002002764   | A  | 20040421 | ZA 2002-2764     | 20020409 |
| NO 2002001719   | A  | 20020411 | NO 2002-1719     | 20020411 |
| PRAI DE 1999-19949208   | A  | 19991013 |                  |          |
| DE 2000-10042696  | A  | 20000831 |                  |          |
| US 1999-160547P   | P  | 19991020 |                  |          |
| WO 2000-EP9867  | W  | 20001009 |                  |          |
| OS MARPAT 134:311105  |  |          |                  |          |
| GI  |  |          |                  |          |



AB The invention relates to the preparation of substituted (Z)-aminomethyleneindolines I [wherein X = O or S; R1 = H, C1-4 alkoxy carbonyl, C2-4 alkanoyl; R2 = HO2C, C1-6 alkoxy carbonyl, C4-7 cycloalkoxy carbonyl, aryloxy carbonyl, aminocarbonyl, or alkyl-substituted aminocarbonyl; R3 = H, C1-6 alkyl, C3-7 cycloalkyl, CF3, heteroaryl, or (un)substituted Ph or naphthyl; R4 and R5 = independently C3-7 cycloalkyl, monosubstituted phenyl] isomers and salts thereof as receptor tyrosine kinase and cyclin/CDK complex inhibitors for the treatment of endothelial cells and tumor cell proliferation. For example, 1-acetyl-6-ethoxycarbonyl-3-(ethoxyphenylmethylene)-2-indolinone and N-(4-aminophenyl)-N-(3-dimethylaminopropyl)acetamide were stirred together in DMF at 100° for 3h followed by addition of piperidine to give I (X = O; R1 = H; R2 = EtO2C; R3 = EtO; R4 = (Me2NCH2CH2CH2)N(Ac)C6H4; R5 = H). I inhibited the proliferation of endothelial cells with an IC50 of 0.003 μM.

IT **334951-08-5P 334951-23-4P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

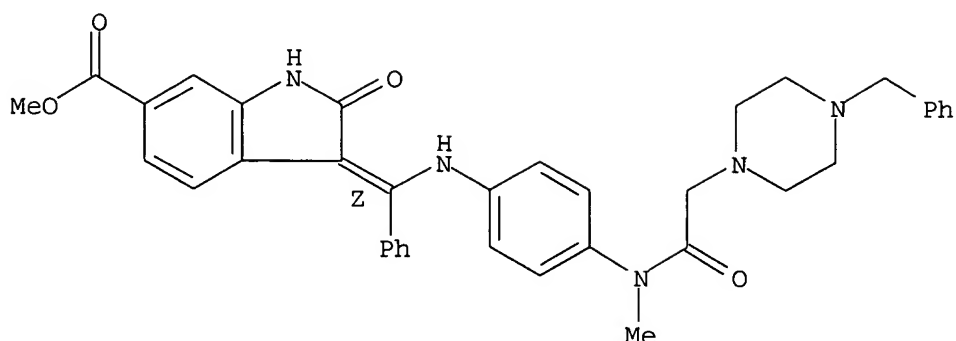
(title compds.; preparation of substituted aminomethyleneindolinone inhibitors of tyrosine receptor kinases and CDK/cyclin kinases as antitumor agents and inhibitors of cell proliferation)

RN 334951-08-5 CAPLUS

CN 1H-Indole-6-carboxylic acid, 2,3-dihydro-3-[[[4-[methyl[[4-(phenylmethyl)-1-piperazinyl]acetyl]amino]phenyl]amino]phenylmethylene]-2-oxo-, methyl ester, (3Z)- (9CI) (CA INDEX NAME)

10/489087

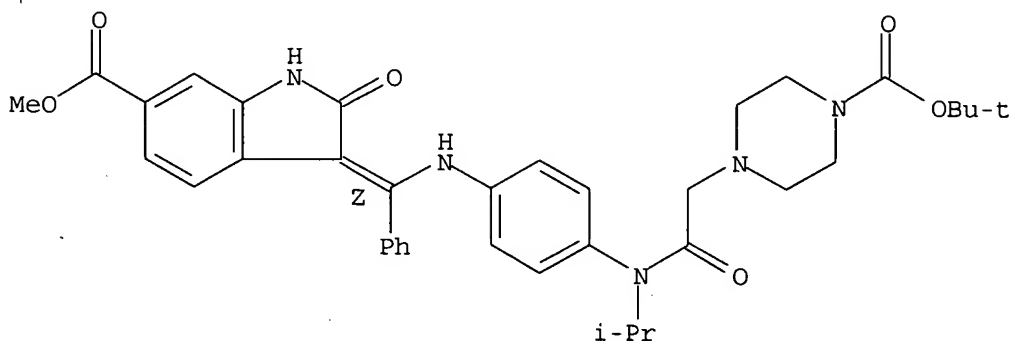
Double bond geometry as shown.



RN 334951-23-4 CAPLUS

CN 1H-Indole-6-carboxylic acid, 3-[[[4-[[[4-[(1,1-dimethylethoxy)carbonyl]-1-piperazinyl]acetyl](1-methylethyl)amino]phenyl]amino]phenylmethylene]-2,3-dihydro-2-oxo-, methyl ester, (3Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT 334951-54-1P 334951-61-0P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(title compds.; preparation of substituted aminomethyleneindolinone inhibitors of tyrosine receptor kinases and CDK/cyclin kinases as antitumor agents and inhibitors of cell proliferation)

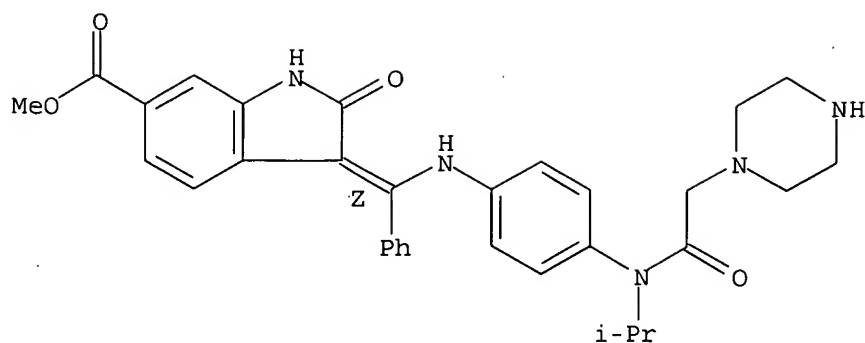
RN 334951-54-1 CAPLUS

CN 1H-Indole-6-carboxylic acid, 2,3-dihydro-3-[[[4-[(1-methylethyl)(1-piperazinylacetyl)amino]phenyl]amino]phenylmethylene]-2-oxo-, methyl ester, (3Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

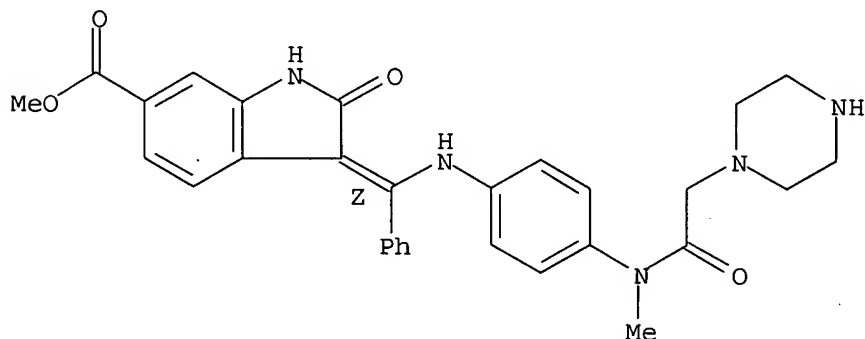


10/489087



RN 334951-61-0 CAPLUS  
CN 1H-Indole-6-carboxylic acid, 2,3-dihydro-3-[[[4-[methyl(1-piperazinylacetyl)amino]phenyl]amino]phenylmethylenel]-2-oxo-, methyl ester, (3Z)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



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ALL CITATIONS AVAILABLE IN THE RE FORMAT

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| SINCE FILE | TOTAL   |
|------------|---------|
| ENTRY      | SESSION |
| -5.11      | -5.11   |

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10/489087

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